

# Integrated Coastal Management in Romania

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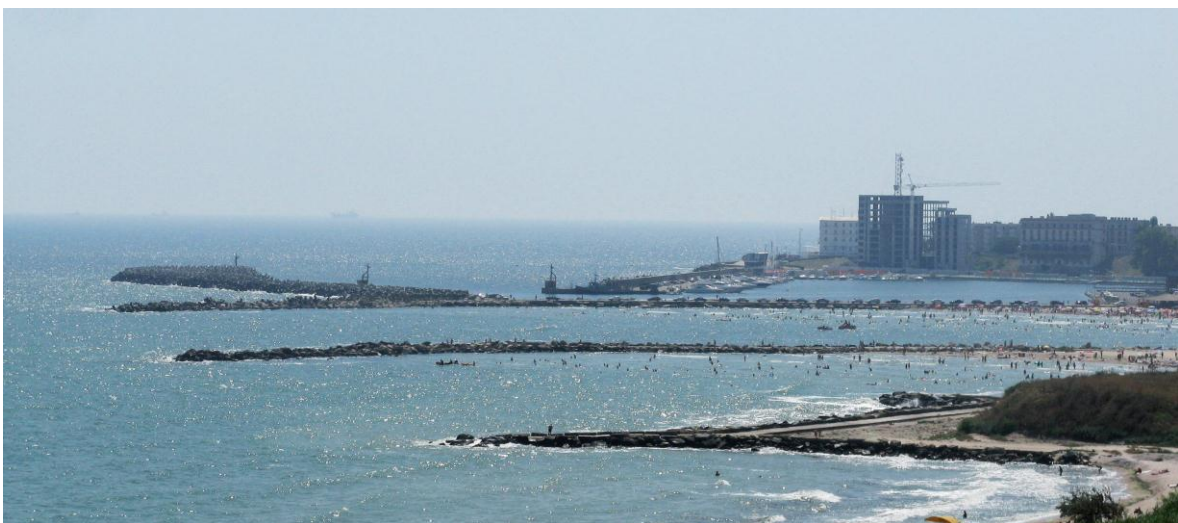
## Summary

The Romanian government has adopted the ICZM Law in 2002 and established institutional arrangements. The Ministry of Environment and Sustainable Development is responsible for water and coastal policy development and chairs the high-level national ICZM Committee.

A preliminary ICZM Strategy is in the process of stakeholder consultation.

The first steps of the ICZM cycle, dealing with the planning phase have taken place. To facilitate the next steps relating to the implementation of coastal measures, the ICZM Strategy and accompanying Action Plans need to be incorporated into law. Integrated spatial planning of the coastal zone, including the marine part, may be an important legal instrument.

International cooperation within an EU context and in the frame of bilateral aid, sharing knowledge and experiences, is of great help in the development of the Romanian ICZM programme and in the preparation of adaptive coastal responses to anticipated impacts of climate change.



*Constanta - Romania: the largest Black Sea harbour city. (photo: Claudia Coman)*

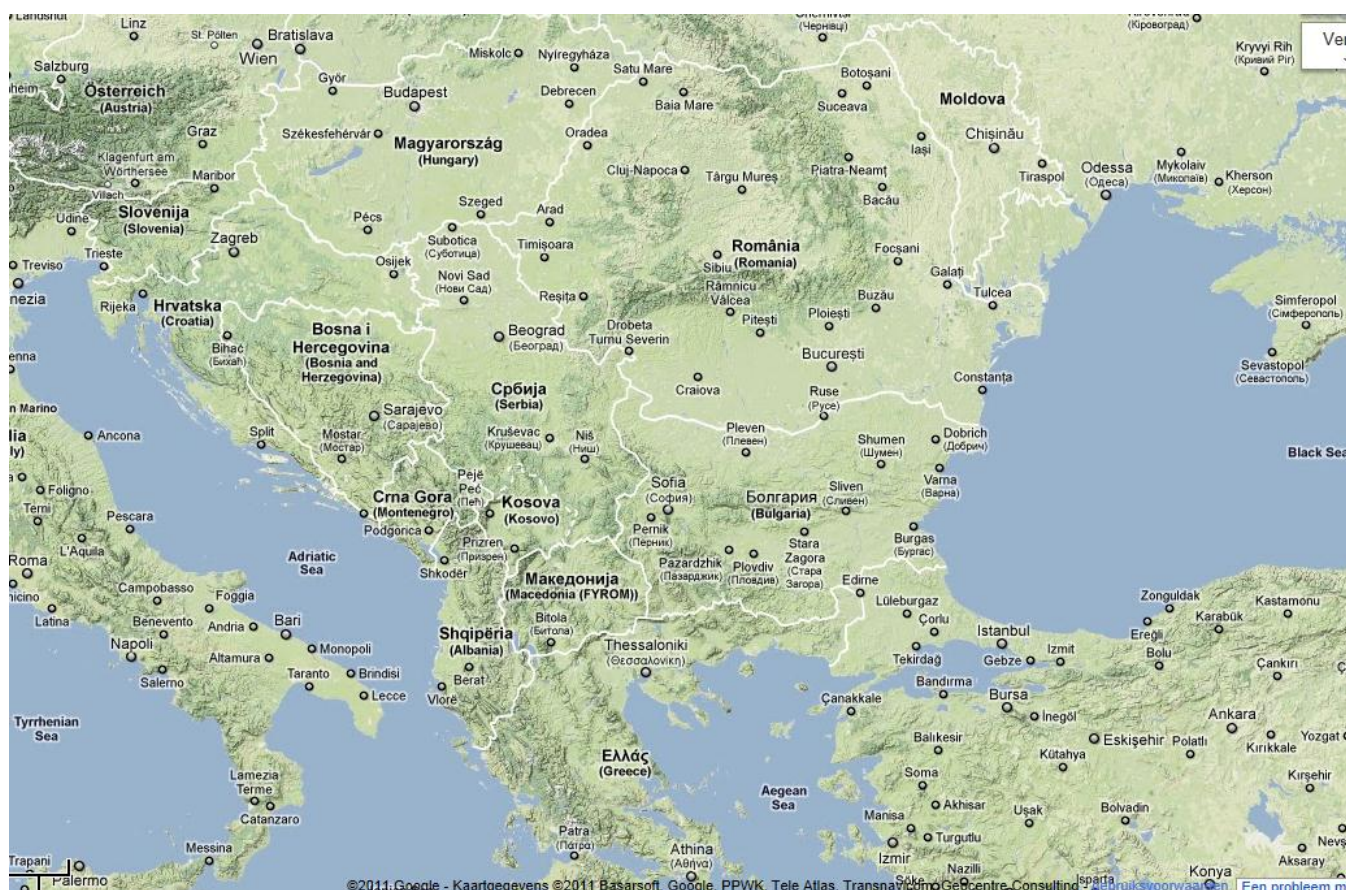


## 1. Why Integrated Coastal Zone Management in Romania?

Romania, as a member state of the European Union (EU), created new perspectives for enhancing and harmonising economic development with care for the environment. Romania's policies focus on adopting and implementing the EU Water Framework Directive (WFD - 2000/60/EC) through water resource management, within a legal and institutional framework. It is also promoting compliance with the "European Parliament and of the Council Recommendation concerning the implementation of Integrated Coastal Zone Management in Europe" (May 2002).

Although Romania has a relative low Gross Domestic Product (GDP) per capita, it has decided to begin the ICZM process, because:

- The coastal zone is a key component of the national economy, and subject to increasing pressure for natural resources and space;
- The coastal zone is rich and diverse, but pressure on the resource base leads to conflict and damage;
- The impacts of climate change require the development of adaptive responses.



**Figure 1 : Romania - SE Europe, bordering the Black Sea with Constanta, the harbour city and Tulcea, the apex of the Danube Delta. (source: Google maps: ©2011 Google – Kaartgegevens ©2011 Basarsoft, Google, PPWK, TeleAtlas, Transnavicom, Geocentre Consulting)**

As a consequence, a new coastal management system will provide coordination among:

- (1) People who live and work in the area,
- (2) Policy-, decision makers and coastal stakeholders responsible for sustainable development of coastal resources,
- (3) Scientific communities providing valuable information on coastal systems, required for long term planning and implementation of coastal adaptive strategies.

## 2. Main coastal issues

Tourism in the coastal zone has a high priority. This together with other sectors such as harbour development, transport infrastructure and agriculture are key factors in economic development. Romania's GDP showed a significant increase. The Purchasing Power per inhabitant doubled in the period 2001 – 2008, then fall back somewhat and is expected to reach in 2011 the level of 2008 (Eurostat website). The construction sector showed the greatest increase, while the agricultural component decreased.

These economic developments, especially on the southern Romanian Black Sea coast, put severe pressure on the coastal system, resulting in habitat loss, threatening its functional integrity and reducing opportunities for future exploitation. At the same time conflicts between users, particularly in the southern, economically developed part of the Romanian coast, portrays a wide range of conflicts.

The southern coastal zone is characterised by coastal urbanisation resulting from increasing population density, expanding summer beach tourism (e.g Navodari, Mamaia, Eforie North and South, Vama Veche) and growth of recreational activities including holiday houses. When combined with industrial activity this may have positive economic benefits. However, **coastal urbanisation** in particular, also has negative effects. For example, on coastal landscapes it can lead to a decrease in the natural diversity of the area and cause serious damage to the natural shoreline defence (in this case coastal sand dunes). It also impacts on traditional socio- economic structures. Other key issues affecting the coastal zone include:

**Pollution**, which is one of the most critical problems. Pollution is caused by industry, urban centres and agriculture. It is derived from non point sources (agriculture fertilisers, insecticides and pesticides) and point sources (industrial and municipal wastewater);

**Coastal erosion** caused by a decreasing supply of sediment from the Danube, knock-on effects of coastal structures such as harbour jetties, groynes and breakwaters and ongoing global sea level rise since the mid 19<sup>th</sup> century;

**Decrease in the coastal resources**, such as fresh water, which became overexploited when satisfying the increasing demands from agriculture and tourism;

**Long-term coastal risks due to climate change** and the impact of accelerated sea level rise and an increased frequency and intensity of storms on coastal erosion, changes in seawater temperature and salinity, and reduction of biodiversity.

Taken together these can result in multiple conflicts between:

- industry and tourism;
- urban development and nature conservation;
- tourism and nature conservation;
- agriculture and nature conservation;
- tourism recreation and marine environmental conservation.

Maintaining tourism as an economic driver is particularly sensitive to environmental problems. The quality of bathing waters is a significant issue for Romanian coastal areas. EU-regulations for bathing water are followed but in 2008, the Blue Flag Award was only given to one Romanian beach, Vega Beach in Mamaia resort. Local authorities such as the Public Health Authority monitor bathing water quality during the summer season. The results are made available to the public through mass media.



*The Blue Flag at Vega Beach, Mamaia, 2008. (photo: C.Coman)*



*Southern part of Mamaia beach with hotels and promenade close to eroding beach. (photo: C. Coman)*

Tourism is not only sensitive to waste water but also to other pollutants such as chemicals, visual intrusion on the landscape and to noise disturbance. Problems arise particularly in areas with intensive uses, such as petro-chemical industry and harbours.



**Recreation** opposite of the Petromidia oil refinery, Navodari beach. (photo: C. Coman)



**Sulina harbour** with mixed shipping functions. (photo: C. Coman)

	Units	2000	2001	2002	2003	2004	2005	2006
<b>Tourists accommodations</b>	<b>No</b>	764	767	758	793	844	891	919
of which hotels	<b>No</b>	258	258	259	270	275	285	291
<b>Existing capacity</b>	<b>places</b>	119410	117428	116419	116531	116935	117218	118778
of which hotels	<b>places</b>	74402	73691	73589	73265	73665	74222	74624
<b>Capacity in function</b>	<b>places-days *1000</b>	8730	9571	10390	10516	10383	9919	9423
of which hotels	<b>idem</b>	6459	7213	7657	7931	7788	7593	7233
<b>Tourist arrivals</b>	<b>*1000</b>	672	659	685	718	755	713	686
Foreigners	<b>*1000</b>	33	45	58	67	84	88	62
Romanians	<b>*1000</b>	639	614	627	651	671	625	624
<b>Overnights stays</b>	<b>*1000</b>	4459	4530	4290	4201	4338	4027	3746
Foreigners	<b>*1000</b>	266	373	435	468	593	634	445
Romanians	<b>*1000</b>	4193	4157	3855	3733	3845	3393	3301
<b>Net using capacity in function</b>	<b>%</b>	51.1	45.9	41.3	39.9	41.8	40.6	39.8
<b>Average days of stays</b>	<b>days</b>	6.6	6.9	6.3	5.8	5.7	8.2	5.5

*Table 1: Romanian tourism capacity and activity at the Black Sea littoral during 2000-2006. (source: National Institute of Statistics yearly Book 2007)*

Tourist accommodations have expanded since the year 2000 (Table 1). The number of tourist arrivals increased recently strongly in August: with more than 20% comparing 2010 with 2011 arrivals, passing the level of a million arrivals (National Institute of Statistics).

Most of the tourists are Romanians and they stay 5 – 8 days and use about half of the existing accommodation capacity. In addition to the problems associated with factors such as pollution, which impact on the number of tourist visiting a particular area, tourism is itself has environmental consequences. High-rise coastal development disturbs protected areas (e.g. 2 Mai -Vama Veche, Danube Delta) and increases pressure on the infrastructure. For example, four coastal sewage treatment plants are being refurbished through the EU- Instrument for Structural Policies for Pre-Accession (ISPA) Programme. Further from the coastline, activities such as agriculture and industries along the Danube River, are also impacting the coastal zone.



***Beach, cliff, hotels and apartments***  
*northern part of Euforie resort. (photo: C. Coman)*



***Waste water treatment plant: extension and rehabilitation: Constanta. (photo: C. Coman)***

To solve all these often interrelated and complex problems, it is necessary to consider the issues in a broader socio-economic and institutional context. The Romanian government has taken several initiatives to begin an Integrated Coastal Zone Management (ICZM) programme, as a response to these coastal problems. These endeavours focus on integrated planning through implementing coastal policies directed at sustainable development of the coastal zone.

### **3. Where is ICZM applied in Romania?**

#### **Demarcation of the Romanian coastal zone**

One of the first ICZM activities is to define the coastal zone. The following definition results from a consultative workshop held in Constanta by the Dutch assisted ICZM 2002 – 2005 (MATO) project.

#### **How far inland?**

A legal definition for the inland boundary of the coastal zone is the boundary of the watershed because of its relationship to the control of pollutants entering the marine environment.

The watershed of Romanian coastal Black Sea region Dobrogea encompasses multiple administrative jurisdictions. This inland, watershed boundary is appropriate for the specific purpose of controlling land-based sources of marine pollution and fresh water inflow but not for other ICZM purposes.

The demarcation of the Romanian Coastal zone was made by applying a hybrid definition of the coastal zone, realising optimal water management and facilitating the utilisation of spatial and land use planning instruments. The existing legal provision were taken into account in defining four sub-zones and their different fields of policies and regulations (Table 2 and Figure 2).

Demarcation of the coastal zone in Romania				
Zone:	Inland boundary	Seaward boundary:	Includes:	Pressures→ Impacts
<b>Upland Impacting zone</b>	Watershed	50 m +MSL	Dobrogea hills (recharge area)	Human settlements, deforestation → groundwater pollution, soil erosion
<b>Coastal Planning Zone.</b>	50 m +MSL elevation	50 – 150 m (coastal strip)	Coastal plain, lakes, lagoons, DDBR	Agriculture, irrigation, industry, waste water, transport, tourism → soil-water-atmosphere pollution, dehydration-ecosystem damage
<b>Coastal Management Zone</b>	50 - 150 m (coastal strip)	1 NM seaward from baseline	Near shore zone (land and waters), beaches, infrastructure	Higher population density, waterfront development, ports and marinas construction, groundwater over-harvesting → coastal erosion-accretion, dehydration, environmental degradation
<b>Black Sea Impact Zone</b>	1 NM line seaward from baseline	12 NM line	Territorial waters	Water pollution, over-harvesting, ferries-shipping lanes, ecosystem damage, biodiversity loss

Table 2: **Demarcation of the Romanian Coastal Zone.** (source: Royal Haskoning – Romanian ICZM project MATO2/RM/9/1)

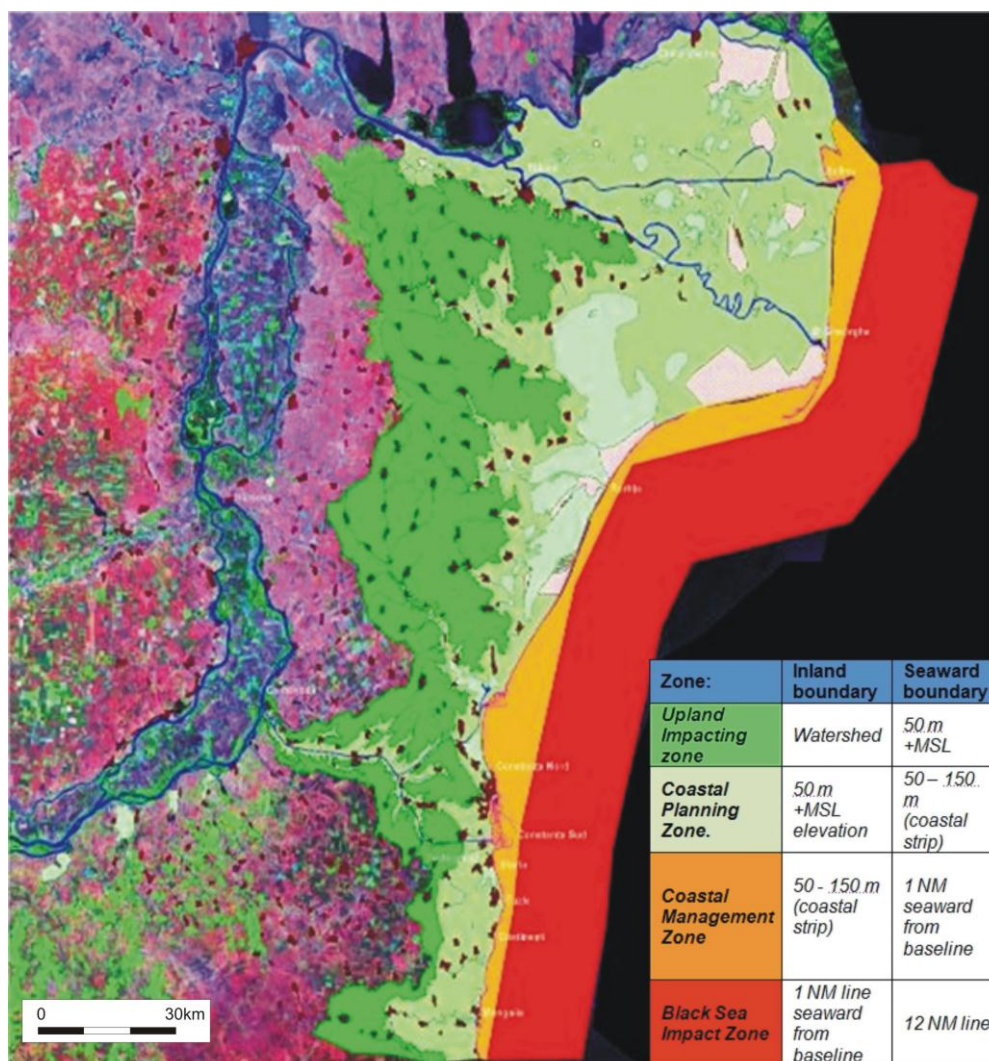


Figure 2: **The Romanian Coastal Zone:** the Black Sea Coast, the Danube Delta in the north and the four zones of table 2. (Source.: Royal Haskoning – Romanian ICZM project MATO2/RM/9/1)

The zones as identified in Table 2 regarding the demarcation of the coastal area will become subject to different policies and regulations. They are included in the ICZM Strategy working document. Some specific activities in the zones are included in several Romanian ICZM Laws.

The Coastal Management Zone, covering the land-water interface, starts inland at 100-150 m landward of Mean Sea Level (MSL), while the seaward boundary is defined as one Nautical Mile from the MSL. The area between MSL and 100-150 m landward of the MSL is considered as set-back area, a buffer against flooding and erosion and with strict control of construction activities.

#### **How far offshore?**

The offshore boundary of the Black Sea Impact Zone was defined as 12 NM, the marine territorial boundary similar to most other European countries. It takes into account the physical system, especially the continental shelf and the relation between national and local authorities, for controlling activities and resource exploitation offshore.

## **4. Romanian approach to ICZM**

### **4.1 Introduction**

Balancing coastal development with the environment in the southern part of the Romanian Black Sea coast is a real challenge. Because of the large population and intense economic activity, the Government of Romania has placed a high value on the development and implementation of Integrated Coastal Zone Management. This is not only to comply with EU requirements but also because of the economic importance of the coastal area. Furthermore, the Romanian Government realises the threats and stresses to which the coastal area is exposed now and in the future. The main challenges are:

- The unsustainable use of coastal resources,
- The increase in population in the area and
- The long-term impacts of Global Climate Change.

Creating a legal framework for ICZM was the first step to address these challenges.

### **4.2 Creation of the ICZM-Law – 2002/3**

As an initial response to the EU ICZM Recommendations, the Romanian Government formulated the Emergency Ordinance 202 in December 2002; later modified and changed to ICZM Law 280/2003. It stipulates the tasks and responsibilities of the relevant central and local authorities and institutions, as well as clarifying ICZM aims and requirements.

In Romania, the Ministry of Environment and Sustainable Development (MESD) through its Water Resources Department is responsible for policy development and legislation related to the implementation of the EU-Water Framework Directive and the EU-ICZM Recommendations.

#### **The Romanian legal framework of ICZM has the following main components**

- Provisions relating to use of the coastal zone as public property;
- Competences of authorities responsible for environmental protection, and sustainable development;
- Public participation in decision-making and access to information;
- Evaluation of integrated management of the defined four coastal sub-zones;
- Provisions regarding infringements and offences.

#### **Some future legal directions**

At present, the Romanian ICZM Law needs more enforcement. Improvements are also required to land and sea use planning; a first combined terrestrial and marine spatial map of existing functional uses has been produced in the frame

of the EU-PlanCoast project (Figure 3). Additional amendments are needed to incorporate integrated spatial planning of the coastal zone into legally binding agreements. Regulations to improve the exchange of coastal and marine data, dissemination of information to coastal stakeholders should be included. There is also a need to provide a legal arrangement for the proper functioning and financing of the activities of the high level National ICZM Committee and its technical secretariat. The inland boundary of the coastal zone must be redefined in order to correctly apply the ICZM law.

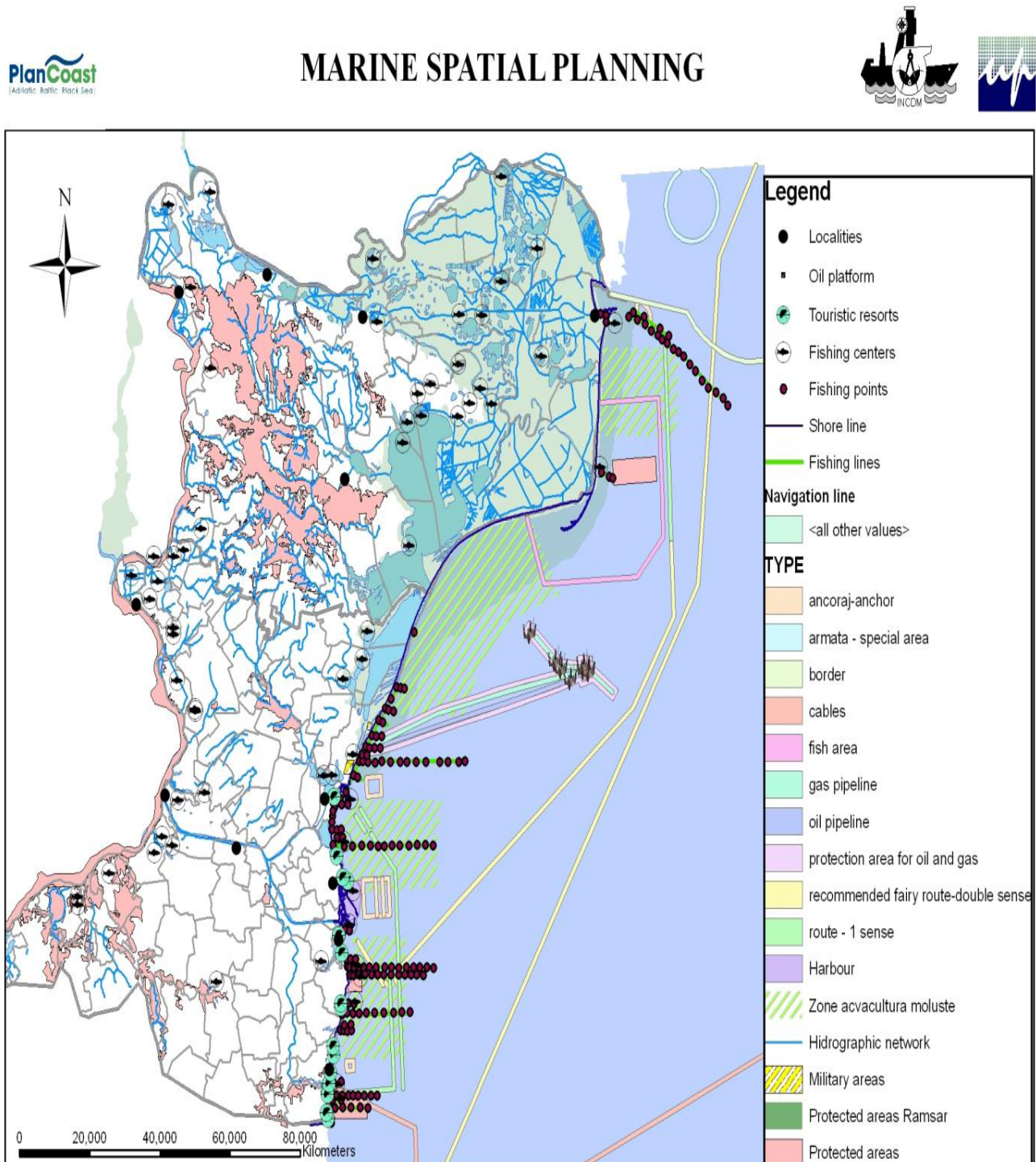


Figure 3: **Romanian Marine Spatial Planning Map** – existing activities. (source: EU-Plancoast Project 2008, see website)

### 4.3. Creation of the National ICZM Committee – 2004

Because of ICZM Law, a **National ICZM Committee (NC)** was established in June 2004 by Government Decree 1015/2004. As prescribed by the ICZM Law, representation on the National Committee encompasses about 50 departments, institutions and organisations from the national, county and local level. The Secretary of State for Water of the Ministry of Environment chairs this high level Committee. Under the National Committee, **Working Groups** consisting of key experts from relevant authorities and research institutes should provide expert advice and guidance on specific topics such as coastal spatial planning, coastal erosion, ICZM legislation and rules, action planning and strategy development, monitoring and control of the coastal environment, and information and communication. The National ICZM Committee is supported by a **Technical Secretariat (TS)**.

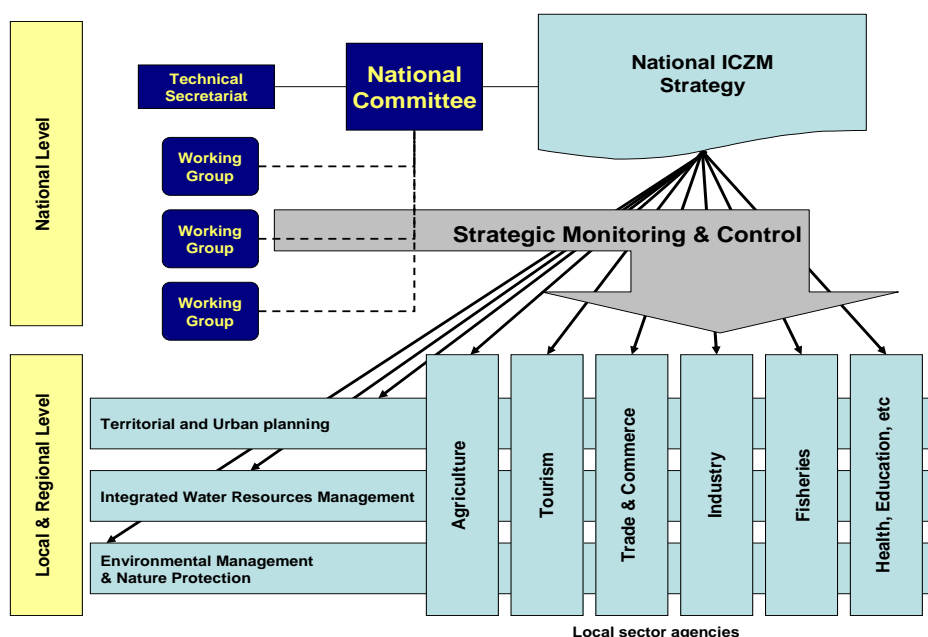


Figure 4: **Proposed Institutional framework for ICZM.** (source: Royal Haskoning – Romanian ICZM project MATO2/RM/9/1)

**The proposed institutional model** aims to strengthen interagency collaboration and to facilitate harmonisation in the development of integrated policies and plans (Figure 4).

The final responsibility for coordinating tasks rests mainly with the MESD and the NC. This proposed institutional framework has the following main features:

- Preparation and implementation of economic sector policies and plans by existing government sector agencies, mainly at regional and local level, through existing laws and regulations.
- Implementation of proactive and adaptive measures derived from cross-sectoral integrated planning by the sectoral agencies.

In this way the guidance, steering, communication and coordination based on a thorough knowledge of the socio-economic and natural coastal system can be strengthened.

### 4.4. Making an ICZM Strategy – 2007 onwards

At the request of the Ministry of Environment and Sustainable Development (MESD) a preliminary ICZM Strategy was prepared by a Romanian ICZM expert with additional contributions from Dutch experts. Stakeholder consultation has helped improve the Strategy. Once agreed it will become part of the ICZM Law.

**Elements within the preliminary ICZM Strategy are:**

- Vision for the Romanian coastal zone;
- Policy and strategic direction for development;
- ICZM tools and technique;

- Institutional and legal ICZM settings;
- Public participation, communication and information;
- ICZM monitoring and reporting system;
- ICZM Action Plan – activities and plans to implement ICZM;
- Steps towards a comprehensive national strategy.

## 5. Examples of Romanian coastal projects supporting ICZM efforts

***“Implementation of WFD and ICZM in Coastal and Transitional Waters in Romania”*** supported by the Dutch (EVD-Netherlands Ministry of Economic Affairs, Royal Haskoning & EUCC, MATO2/RM/9/1 (2003 – 2005) **project:** resulted in an Outline ICZM Strategy, identification of coastal problems, consultative workshops, introduction of GIS and data management (more information: EC-2006 & ‘Saving the Black Sea’-2005).

***“ Second phase of ICZM (2006 – 2008): “Institutional strengthening for implementation of the WFD and ICZM recommendations along the Romanian Black Sea coast”*** project supported by EVD - Netherlands Ministry of Economic Affairs.

***“Study on coastal protection and rehabilitation” (JICA) 2004 – 2007):*** resulted in comprehensive hydrodynamic analyses and recommendations on coastal defence measures.

***EU PlanCoast- Spatial Planning in Coastal Zones – 2006 – 2008:*** developed tools and capacities for integrated spatial planning in EU coastal zones and marine areas , see Figure 3 (<http://www.plancoast.eu>).

## 6. Some lessons from ICZM developments in Romania

**1. Include ICZM Strategies and Action Plans into Law;** spatial planning can act as a effective legal mechanism.

**2. Create ICZM - Pilot sites** such as the one for the Danube Delta (see CCC I-3-2) and Mamaia beach ( see Website [www.eurosion.org](http://www.eurosion.org)).

**3. Increase monitoring capabilities and data management**

Natural and socio-economic processes influence the dynamic coastal zone. Effective monitoring of the way these interact is important for future policies and practice for sustainable development. Strengthen understanding through capacity building, data base management, data exchange including dissemination of information to stakeholders.

**4. Create a ICZM dissemination platform**

The ICZM dissemination platform is required to inform coastal stakeholders, including the public about the coastal environment, investment projects and decisions taken in the coastal zone. The platform should be an important part of raising public awareness and increasing participation in the decision- making process.

## 7. Concluding remarks

Romania began the ICZM planning process in 2002 by setting the legal and institutional framework. Several demonstration projects were used to strengthen knowledge about the ICZM process. International cooperation was important to the success of these projects.

Romania, an economically under resourced EU country, which is emerging from political transformation, is nevertheless developing an integrated approach to planning and management for achieving sustainable development of its coastal and marine resources. This has been achieved partly because of shared experience, with several EU-coastal partners.

Romania will continue to improve the implementation of the ICZM process. Special attention will be given to strengthening the ICZM institutional arrangements. In the meantime, priority will be given to the National ICZM Strategy and the development and implementation of its Action Plan, as well as reviewing the Coastal Law. All the above require approval by the Romanian government, which already recognises the importance of the coastal zone to future economic and social development.

## 8. References

- **EC – 2006:** Evaluation of Integrated Coastal Zone Management (ICZM) in Europe – Final Report
- **JICA – 2007:** “Study on Protection and Rehabilitation of the Southern Black Sea shore in Romania”, Japan.
- **MATO2/RM/9/1 – 2005:** Final Report "Implementation of the WFD and ICZM in transitional and coastal waters in Romania" with an outline ICZM Strategy issued in 2005,

### Websites:

- **EC – 2006:Evaluation of ICZM in Europe**  
[http://ec.europa.eu/environment/iczm/pdf/evaluation\\_iczm\\_report.pdf](http://ec.europa.eu/environment/iczm/pdf/evaluation_iczm_report.pdf)
- **Eurostat – European Commission**  
<http://epp.eurostat.ec.europa.eu/tgm/table.do?tab=table&init=1&language=en&pcode=tec00001&plugin=1>
- **EU Black Sea Scene project:**  
<http://www.blackseascene.net>
- **EU EuroSION including Case studies: Danube Delta & Mamaia Beach:**  
<http://www.euroSION.org>
- **EU-Plancoast- Spatial Planning in coastal zone & Handbook - Marine Spatial Planning:**  
[www.plancoast.eu](http://www.plancoast.eu)
- **EU SeaDataNet project:**  
<http://www.seadatanet.org>
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